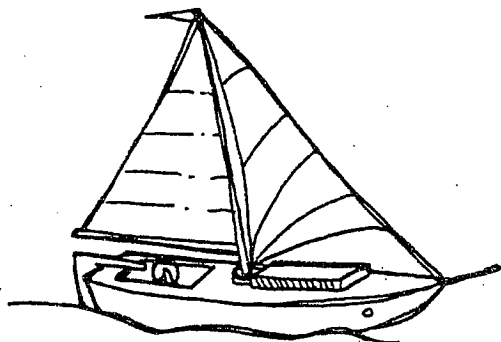
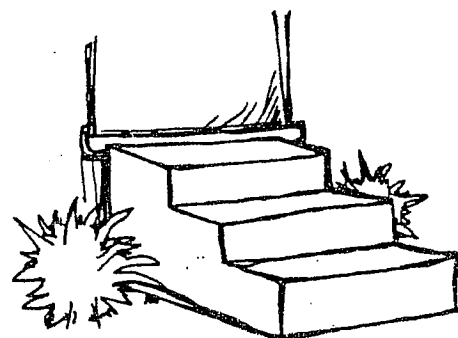


Practical Applications

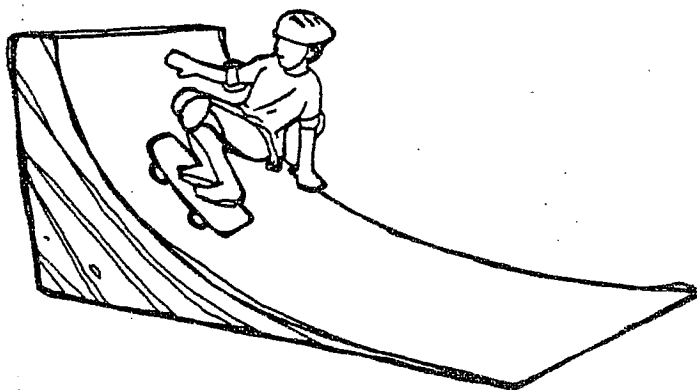
Use the Pythagorean theorem to solve the problems below. Use the pictures or draw some of your own to help you find the right triangle in each problem. Give exact answers unless instructed otherwise.



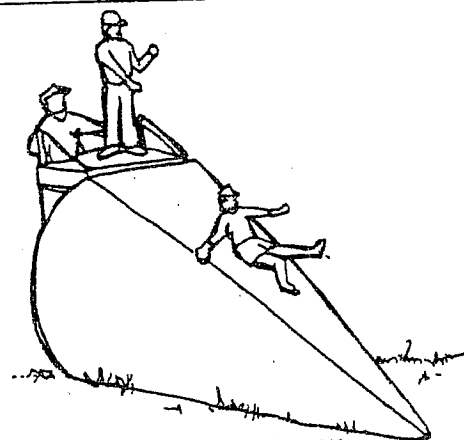
1. Karyn is making a sail for a boat. She wants the legs of the sail (triangle) to be 5 m and 1 m. What should the measure of the hypotenuse be?
- _____



2. Niles is building a ramp next to the steps in the building for those who are in wheelchairs. The steps measure 4 ft tall. He has 10 ft of space next to the steps. How long should he make the ramp?
- _____



3. Ken wants to build a ramp to use when skateboarding. He wants his ramp to be 4 ft tall and 5 ft long. Boards wide enough for the ramp cost \$4.75 per foot. How much will it cost Ken for the ramp itself not including the support material?
- _____



4. Julie wants to build a slide like the one shown above. She wants the slide to be 3.25 m tall and come out 3.5 m. What is the distance kids will slide? (Round to the nearest hundredth.)
- _____

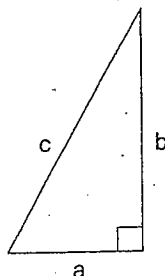
Mixed Practice With Right Triangles

Make a sketch for each problem.

Use the formula $a^2 + b^2 = c^2$ to solve each problem.

You may use a calculator.

Round your answers to the nearest hundredth and circle them.



- A. A right triangle has a hypotenuse of 26. The length of one leg is 15. What is the length of the other leg?

- B. A triangle has a short leg with a length of 9. The other leg is twice as long. How long is the hypotenuse?

- C. The legs of a right triangle measure 12 and 16. What is the length of the hypotenuse?

- D. The hypotenuse of a right triangle is 17. One leg measures 15. What is the length of the other leg?

- E. A triangular sail is 82 feet high. Its width is 29 feet. What is the length of the sail's hypotenuse?

- F. A 25-foot ladder is leaning against a wall. It forms the hypotenuse of a right triangle. The bottom of the ladder is 6 feet from the wall. How far up the wall will the ladder reach?

- G. Both legs of a right triangle measure 3. What is the length of the hypotenuse?